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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/540,089

06/20/2005

Per-Ingvar Branemark

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7590

04/04/2008

THE MAXHAM FIRM

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EXAMINER

WOODALL, NICHOLAS W

ART UNIT

PAPER NUMBER

3733

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DELIVERY MODE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/540,089	Applicant(s) BRANEMARK, PER-INGVAR	
	Examiner Nicholas Woodall	Art Unit 3733	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 January 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 11-35 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 11-35 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This action is in response to applicant's amendment received on 01/10/2008.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 11-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Olson (U.S. Patent 2,113,600) in view of Guedj (U.S. Patent 5,871,356).

Regarding claim 11, Olson discloses a device comprising a generally cylindrical anchoring portion and a number of slots extending from the insertion end (see Figure 1 below). The anchoring portion includes an insertion end and includes an external screw thread. The slots are defined by a leading slot wall and a trailing slot wall related to the direction of rotation defined by the external thread, wherein at least the radial outermost part of the trailing slot wall defines an angle alpha with the radial direction and slopes obliquely forward from within and outwardly in the direction of rotation. Regarding claim 12, Olson discloses a device wherein the entire trailing slot wall defines the angle alpha with the radial direction. Regarding claim 13, Olson discloses a device wherein the leading slot wall also slopes obliquely forward from within and outward in the direction of rotation. Regarding claim 14, Olson discloses a device wherein the leading and trailing slot walls are parallel with one another. Olson fails to disclose a device further comprising a cavity that opens out at the insertion end in communication with the slots,

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wherein the cavity includes a circular cross-section and widens conically in a direction towards the insertion end. Guedj teaches a device comprising an anchor portion including a cavity that opens out at an insertion end in communication with slots, wherein the cavity includes a circular cross-section and widens conically in a direction towards the insertion end in order to guide bone shavings cut by the slots in the direction of the cavity (column 3 lines 11-18). It would have been obvious to one having ordinary skill in the art at the time the invention was made to manufacture the device of Olson further comprising a cavity that opens out at the insertion end in communication with the slots, wherein the cavity includes a circular cross-section and widens conically in a direction towards the insertion end in view of Guedj in order to guide the bone shavings cut by the slot in the direction of the cavity.

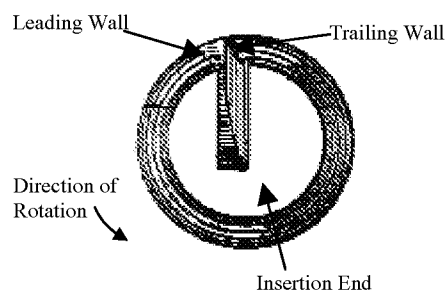
Regarding claims 15-20 and 30-33, the combination of Olson and Guedj disclose the invention as claimed except for the angle α being between 20 to 40 degrees at the outer radial outer end of the trailing slot wall (claims 15-18), the angle α being between 27 to 33 degrees at the radial outer end of the trailing slot wall (claims 19 and 20), the number of slots being between 3 to 10 slots (claims 21-23), the number of slots being between 5 to 7 (claims 24-26), and the slot width at the outer end of the slot corresponds to 15 to 35 percent of the peripheral distance between two slots on the outside of the fixture (claims 30-33). It would have been obvious to one having ordinary skill in the art at the time the invention was made to manufacture the device of Olson modified by Guedj wherein the angle α is between 20 to 40 degrees, wherein the angle α is between 27 to 33 degrees, wherein the number of slots is between 3 to

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10, wherein the number of slots is between 5 to 7, and wherein the slot width corresponds to 15 to 35 percent of the peripheral distance between two slots on the outside of the fixture, since it has been held that where the general conditions of a claim are disclosed in the prior art discovering the optimum or workable ranges involves only routine skill in the art. In re Aller, 105 USPQ 233.

Regarding claim 34, the combination of Olson and Guedj disclose the invention as claimed except for the device being made from titanium. It would have been obvious to one having ordinary skill in the art at the time the invention was made to manufacture the device of Olson modified by Guedj from titanium, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. In re Leshin, 125 USPQ 416.

Figure 1



4. Claims 1 and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Branemark (U.S. Patent 5,769,852) in view of Sparks (U.S. Patent 4,697,969).

Regarding claim 1, Branemark discloses a device comprising a generally cylindrical anchoring portion formed with an insertion end and having an external screw

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thread, a cavity which opens out at said insertion end, and a number of through-penetrating slots extending from the insertion end, wherein each slot connects the cavity with the outside of the anchoring portion and each slot includes a leading wall and a trailing wall related to the direction of rotation defined by the screw threads.

Regarding claim 35, Branemark discloses a method comprising the step of drilling a hole into the bone tissue, wherein the hole is smaller than the inner diameter of the screw thread on the anchoring portion and the step of screwing the fixture into the drilled hole, thereby providing means for connecting a prosthesis to the bone tissue (column 3 lines 16-37). Branemark fails to disclose the outermost part of the leading slot wall and the trailing slot wall define an angle with the radial direction and slope obliquely forward from within and outwardly in the direction of rotation. Sparks teaches a device comprising a slot (14) including a leading slot wall and a trailing slot wall (16 and 17), wherein the leading slot wall and the trailing slot wall define an angle with the radial direction and slope obliquely forward from within and outwardly in the direction of rotation (best seen in Figure 3 of the reference) in order to create clean threads in the material (column 2 lines 59-62). It would have been obvious to one having ordinary skill in the art at the time the invention was made to manufacture the device of Branemark wherein the leading slot wall and the trailing slot walls define an angle with the radial direction and slope obliquely forward from within and outwardly in the direction of rotation in view of Sparks in order to create clean threads in the material.

Response to Arguments

5. Applicant's arguments filed 10540089 have been fully considered but they are not persuasive. The applicant's argument that does not disclose forwardly sloping slot walls in the direction of rotation is not persuasive. First, the examiner would like to note that the applicant's rendition of the Olson reference in attachment A does not properly show the examiner's interpretation of the Olson reference. As shown above the examiner shows the leading slot wall and trailing slot wall, which when looked at from the bottom view of the device, slope obliquely forward in the direction of rotation. The slot walls do not slope rearwardly as stated by the applicant in the arguments. If the device is rotated from left to right, as per a typical right handed thread, when viewed from the bottom the slot walls slope forwardly in the direction of the rotation. The applicant's argument that Olson and Guedj are not capable of being combined because they are not analogous art is not persuasive. Olson and Gruedj are both anchors including slots that cut and remove material and are therefore analogous art. The applicant's argument that Guedj can not be used to teach the cavity because the slots of Guedj do not meet the structural limitations of claim 11 is not persuasive. Olson discloses the slots having the structural limitations of claim 11 and therefore Guedj does not need to have slots including the structural limitations of claim 11. The examiner is using the Guedj reference to teach the cavity connected to slots and is not using the Guedj reference for the structural limitations of the slots. Claim 35 was rejected under 35 U.S.C. 112 second paragraph and 35 U.S.C. 101 as per the MPEP because the use claim did not positively recite any steps. The steps were functionally recited and

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interpreted as a functional limitation as stated in the previous office action. Claim 35 has been amended to positively recite the steps of the use making the claim a proper method claim. The examiner was required to find new art to overcome claim 35, which is directly dependent from claim 11. Therefore, the new grounds of rejection directed to claims 11 and 35 as discussed above were necessitated by the amendment. The examiner has presented the previously discussed rejections for claims 11-34 and new grounds of rejection for claims 11 and 35 as necessitated by the amendment making this office action **FINAL**.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. See PTO-892 for cited references the examiner felt were relevant to the application.

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

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the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nicholas Woodall whose telephone number is (571)272-5204. The examiner can normally be reached on Monday to Friday 8:00 to 5:30 EST..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eduardo Robert can be reached on 571-272-4719. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Nicholas Woodall/
Examiner, Art Unit 3733

/Eduardo C. Robert/
Supervisory Patent Examiner, Art Unit 3733